

A New Species of *Callophrys* (*Mitoura*) from Mexico

(Lepidoptera: Lycaenidae)

KURT JOHNSON

Museum of Natural History, University of Wisconsin, Stevens Point 54481

During a survey of genitalia of Nearctic *Callophrys* which feed on Cupressaceae, a single male specimen which apparently represented a new species, was discovered from the *Juniperus flaccida* Schlecht. habitats of Chihuahua, Mexico. Further examination showed that this specimen lacked forewing scent scales (characteristic, with unique exceptions, in males of *Callophrys* and other Theclinae), differed distinctly in pattern and coloration, and showed genitalic traits intermediate between those of the Nearctic Cupressaceae-feeding group [*C. (M.) nelsoni* (Boisduval), *siva* (Edwards), *loki* (Skinner), *gryneus* (Hübner), and *hessele* (Rawson and Ziegler)] and the Nearctic-Neotropical Lorantheae-feeding group [*C. (M.) spinetorum* (Hewitson) and *johnsoni* (Skinner)]. It is described as a new species below.

Callophrys (*Mitoura*) *turkingtoni*, New Species

(Fig. 1)

DIAGNOSIS. Compared to all *Callophrys* (*Mitoura*): male forewings, androconia absent; under surface, hindwings, distinct marking, distal end of cell; aedeagus, caudal end, three distinct pointed tips (not two). Compared to *C. (M.) siva* (Edwards), *gryneus* (Hübner), and *spinetorum* (Hewitson): upper surface wing coloration burnt sienna, not chamois [males, topotypical *g. castalis* (Edwards)], honey yellow [males, Pima Co., Arizona *gryneus* ssp.], zinc orange [males, topotypical *s. siva*], or dusky dull bluish green [males, all Arizona *spinetorum*] (all colors Ridgway, 1912). Under surface, hindwings, burnt sienna to argus brown, not green (*gryneus* and *siva*) or darker brown (*spinetorum*). Under surface, hindwings, no postbasal markings (*gryneus*, some *siva*); under surface, forewings, no apical marking of cell (*spinetorum*).

MALE.—Upper surface wing coloration burnt sienna confined to basal submarginal area, both wings; limbal area, hindwings, brighter; under surface of forewings burnt sienna (base to postmedian line), apical area parrot green between veins; under surface of hindwings burnt sienna to argus brown from base past mesial line, green marking distal end of cell; mesial line with white and brighter brown markings nearly continuous; limbal area with blue, orange and black markings; six marginal black markings between veins caudad from $2a$ to M_1 (first, third: large; second, overshadowed blue; latter three, small); five submarginal black markings between veins caudad 2^dA to M_4 ; limbal orange marking intense; area distad along outer angle parrot green between veins. Male Genitalia (Fig. 2) similar to those of other *Callophrys* (*Mitoura*), differing markedly as follows: distal end aedeagus with three pointed tips; valvae longer, more slender; labides

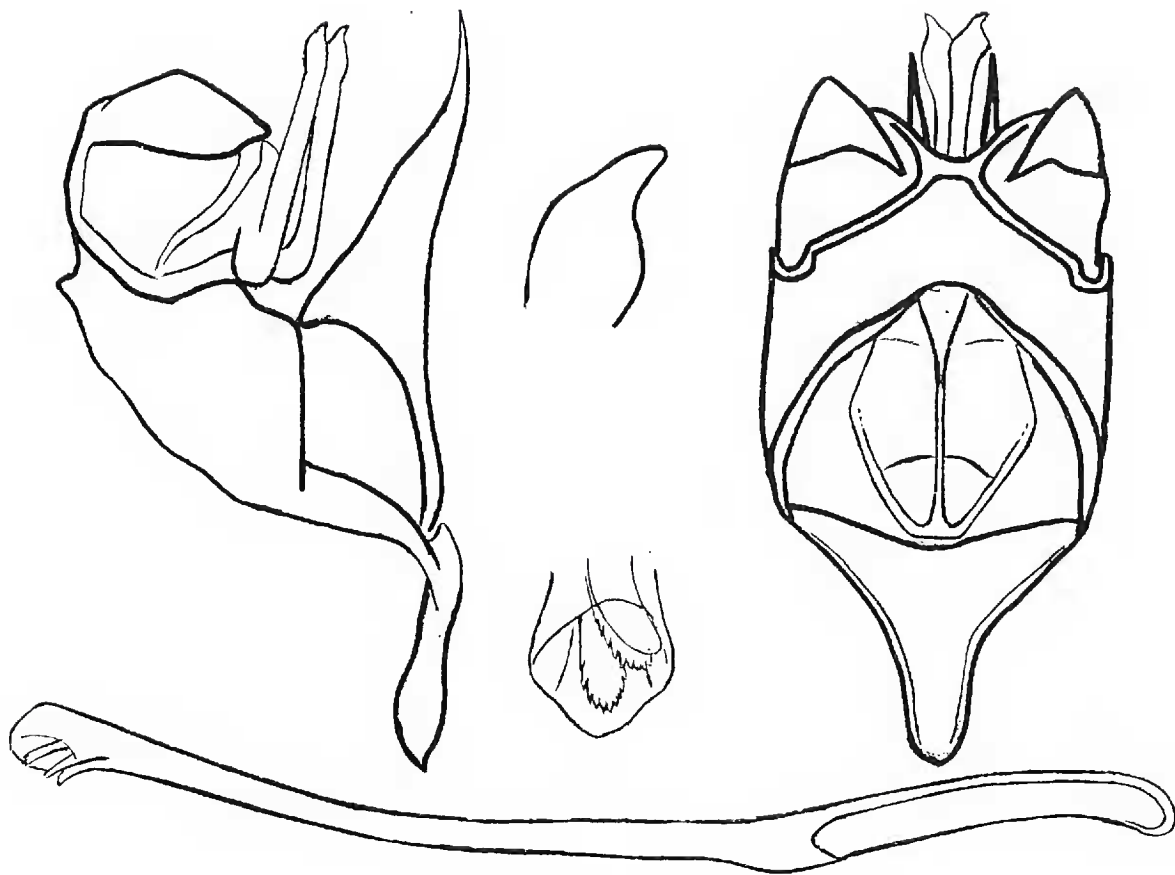


FIGURE 1.

more steeply pointed, not gradually angled; two sculptured distal indentions at suture between vinculum and base of uncullum. Forewing length 13 mm.

FOODPLANT.—Possibly *Juniperus flaccida*.

Holotype male, 10 miles east of NAMIQUIPA, CHIHUAHUA, MEXICO [west slope, San de las Tunas Mountains], 3 July 1947 (W. Gertsch, M. Cazier), in collection of the American Museum of Natural History. Genitalia in vial KJ # 169 at same institution.

One specimen is known, its distinctness assured by genitalic and phenotypic comparison of all currently known Nearctic and Neotropical congeners. The species' geographic and foodplant associations are discussed in Johnson, 1975. Other Mexican material, referable to *C. (M.) siva* and *gryneus* was studied, all from *Juniperus deppeana* Steud. habitats, one from only 60 kilometers southwest of the *turkingtoni* type locality.

I am privileged to name this species after Fr. William R. D. Turkington, O.H.C., first teacher of biology at the old St. Andrews School, founded for the children of the Tennessee mountains by the Order of the Holy Cross.

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LITERATURE CITED

- JOHNSON, K. 1975. Geographic distributions and foodplant diversity in four *Callophrys* (*Mitoura*), Lycaenidae. J. Lepid. Soc. 29 (in press).
RIDGWAY, R. 1912. Color standards and nomenclature. Washington, D.C. (by author), iii and 43 pp., 52 pls.
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BOOK NOTICE

INSECTS AND OTHER ARTHROPODS OF MEDICAL IMPORTANCE—Edited by Kenneth G. V. Smith. British Museum (Natural History), Cromwell Road, London, 1973. XIV + 561 pp. \$15.75.

This present work replaces *A Handbook for the Identification of Insects of Medical Importance* by John Smart, first issued in 1943, and useful to medical entomologists during World War II. The new book has coverage on a world wide basis of major groups of medically important insects and other arthropods. Each of the sixteen contributors is a specialist on the taxonomy of the group concerned. It is intended primarily for identification with keys provided to the following groups: Diptera (adults and larvae), Culicidae, Simuliidae, Phlebotomidae, Ceratopogonidae, Tabanidae, Glossinidae, Muscidae, Calliphoridae, Sarcophagidae, Siphonaptera, Heteroptera, Dictyoptera, and some Arachnida. Arthropods of minor medical importance are also treated systematically. Special sections on insect structure, methods of collecting and preserving, classification and nomenclature, forensic entomology, insects and hygiene, and arthropod vectors (including vector-pathogen tables and disease distribution maps) are included. Detailed discussions on biology, ecology and medical aspects, as well as extensive bibliographies are provided for many groups.—R. W. MERRIT, *Department of Entomology, Michigan State University, East Lansing, 48824*.